

CalPERS

Alternative Investment Management Program 2005 Strategic Program Review

Conducted by:

Pension Consulting Alliance

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Executive Summary

CalPERS is the largest public pension fund in the U.S., possessing one of the largest private equity programs, with more than \$22 billion at December 31, 2004 committed to its Alternative Investment Management Program (AIM Program). Inherent in a program of that size is the opportunity for success, as well as the possibility for impediments to that success. In an effort to maximize its opportunities, the AIM Program adopted a strategic plan in 2000, which was developed with the assistance of McKinsey & Company. Since 2000, it has been a difficult time for investing in the capital markets. The U.S. economy and the capital markets have had to deal with the effects of the terrorist attacks of 9/11, the resulting ongoing war on terror, and now the devastation resulting from hurricane Katrina.

Between January 1, 2001 and December 31, 2004, AIM and the private equity industry also experienced a venture capital bubble, retrenchment, and resurgence. General partners reported mixed investment results, with disappointing returns in the earlier years and more favorable returns in the most recent periods. Commitments to the total private equity marketplace declined from 2001 to 2003, and the top tier general partners became even more selective in their allocations to limited partners. Total commitments rebounded in 2004 with a significant year-to-date increase in 2005.

Over this same period, CalPERS' total assets went from \$164.6 billion to \$182.9 billion. The asset allocation to private equity dropped from 7% to 6% in 2004, but the Policy range was expanded to 3-9% in order to allow for more tactical positioning of the AIM portfolio. Net invested assets went from \$6.8 billion to \$9.6 billion in four years, and annual distributions exceeded contributions in 2004 by \$365 million. With net invested assets approximating \$9 billion currently, AIM also is confronted with the issue of the capacity of the market to produce enough top tier general partners to manage effectively the capital committed to them.

Key Findings

PCA was asked to conduct a strategic review of the AIM Program focusing on its activities since the adoption of the 2000 strategic plan. Key findings of the review include:

- The AIM Program generated relatively favorable results versus its various benchmarks during a volatile and difficult time period.
- With certain general partners, AIM has progressed towards becoming the "Investor of Choice" depicted in the 2000 strategic plan. Implementation of the recommendations contained herein should further AIM's continuing evolution toward that goal.
- The number of general partner relationships continues to be well above levels recommended in the 2000 strategic plan, therefore staff resources are stretched. PCA recommends reducing the number of relationships.
- AIM staff operates in a "flat" organizational structure. Adding a seasoned senior staff member, along with realigning responsibilities, will allow the AIM program to expand its visibility and its dialogue with external and internal audiences.



- Given the difficulties of placing large amounts of capital with smaller partnerships,
 AIM should lever its resources by increasing the use of third parties (i.e., captive fund of funds, separate accounts with an established fund of funds, etc.)
- Decision making has been expedited through the use of delegated authority on almost all of AIM's commitments. Despite being expanded in 2005, there continues to be areas for enhancement that may further expedite decision making.
- PCA observes that the AIM Program does not have a large exposure to coinvestments. Many sophisticated institutional investors believe this to be a valuable niche to enhance portfolio returns. Properly structured, AIM should consider this.
- Three of AIM's nine external resources (advisors) have multiple roles in the private equity program raising the importance of disclosure so that the decision makers are aware of the dual roles played by some.
- Selected expertise and knowledge possessed by certain consultants has not been available to AIM because of their unwillingness to accept fiduciary responsibility contractually. Staff and legal counsel should develop alternatives to facilitate accessing this expertise and knowledge.
- CalPERS' Policy Target and Ranges for Alternative Investment appear appropriate at this time.
- Freedom of Information Act disclosure and "outsourcing" side letters have had varying impacts in the marketplace.

Scope of Review

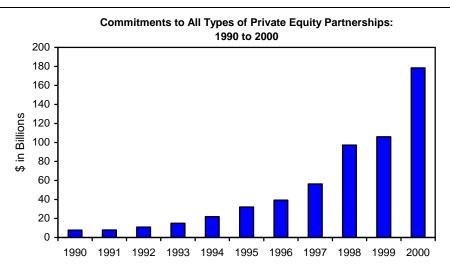
In summary, PCA's review consisted of:

- developing an understanding of the strategic plan and the AIM staff's tactical application thereof;
- reviewing Investment Committee minutes and other documents to the extent necessary to corroborate PCA's understanding of the current status of the program;
- assessing the changes in the private equity industry since the plan was adopted;
- interviewing four institutional investors, twelve general partners, four placement agents, five consultants, and one attorney to develop an understanding of their perceptions of the private equity market and the AIM Program; and
- developing and discussing its recommendations and reporting to staff.



Market Review: 2000 to 2005

At the time the 2000 strategic plan was adopted, the private equity markets were exhibiting astounding growth in assets and generating amazing performance results. Committed capital was being invested and returned to investors at an unprecedented pace, and new investors were drawn to the asset class given the strong returns. As highlighted below, private equity commitments reached over \$175 billion in the 2000 calendar year.



Source: The Private Equity Analyst

According to the *Venture Economics* US Private Equity Performance Index, performance results for each major category, with more than one year of results, were all in double digits. Venture capital was far and away leading the pack with a one-year return of 174% as of year-end 1999.

Venture Economics US Private Equity Performance Index, as of 12/31/99

Fund Type	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
Venture	173.6%	57.1%	47.8%	26.0%	19.7%
Buyouts	30.2%	18.5%	19.3%	16.4%	20.7%
Mezzanine	35.0%	15.6%	14.1%	13.1%	13.4%
All Private Equity	69.9%	31.4%	29.2%	20.2%	19.6%

Source: Thomson Venture Economics/ National Venture Capital Association

The rapid growth of institutional investment in private equity with record amounts of new capital commitments in 1998, 1999, and 2000 ended when the tech bubble of the late 90's burst. The difficulties in the public markets negatively impacted the private markets by reducing investor confidence, eliminating exit opportunities, and reducing valuations. The delayed economic recovery put additional downward pressures on the private markets.



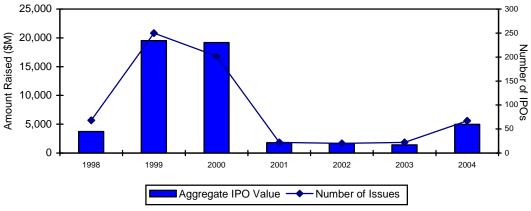
Valuations declined, in general terms, for venture capital and buyout investments since 2000.

Valuations: Venture Capital and Buyout Avg. Pre Money Valuations (\$M) \$140 \$120 \$100 \$80 \$60 \$40 \$20 \$0 2003 2004 1998 1999 2000 2001 2002 Venture Capital Buyout

Source: Thomson Venture Economics

Access to the public market via initial public offering (IPO) was virtually non-existent. Capital raised in the public markets in 2001 declined dramatically from record highs set in 1999 and 2000. Last year exhibited an increase in IPO activity but was still well below prior levels.

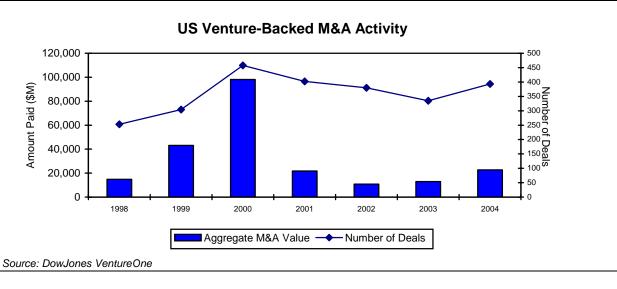
Aggregate Value and Number of US Venture-Backed IPOs



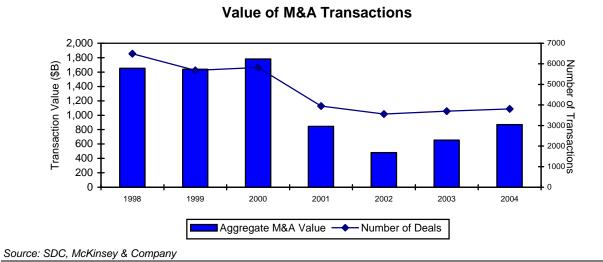
Source: DowJones VentureOne



The opportunity for exiting through a sale for US venture-backed companies also declined dramatically over the same time period.

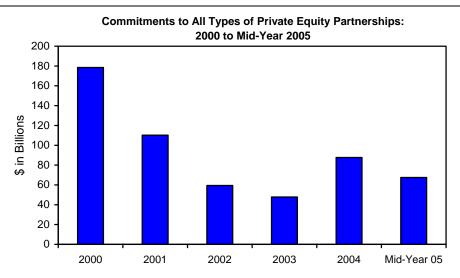


The value of M&A transactions has been increasing over past years, but is still well below activity levels of the 1998-2000 time periods.





However, private equity market activities, including transactions, fund raising, and investment performance have rebounded from declines over the past several years. The 2004 calendar year exhibited the first increase in fund raising activities following three years of declines since 2000. Fund raising activities for 2005 are on pace to exceed 2004's levels.



Source: The Private Equity Analyst

Fund raising activities year-to-date in 2005 have continued to be strong with \$67.5 billion in commitments raised as of mid-year. This amount significantly outpaced the \$31 billion raised in the first half of 2004. LBO/corporate finance has led the way raising 65% of commitments to date, followed by venture capital (20%), fund-of-funds (8%), other private equity (5%), and mezzanine (2%).

According to the *Venture Economics*, US Private Equity Performance Index as of 12/31/04, the improved IPO and acquisition markets have translated into stronger private market performance over the latest year.

Venture Economics' US Private Equity Performance Index, as of 12/31/04

Fund Type	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
Venture	17.6%	-2.8%	-1.2%	26.1%	15.7%
Buyouts	18.6%	8.2%	3.1%	8.9%	13.2%
Mezzanine	9.7%	3.3%	3.0%	7.0%	9.3%
All Private Equity	18.0%	4.6%	2.1%	13.0%	14.0%

Source: Thomson Venture Economics/ National Venture Capital Association

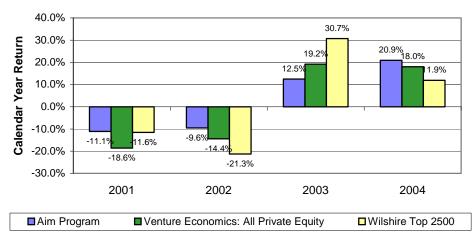
Since the adoption of the 2000 strategic plan, overall performance of the AIM Program has experienced declines in its since inception internal rate of return (IRR). As of December 31, 2000, the Program had a since inception IRR of 19.4%. This aggregate result declined to 11.3% as of 12/31/04. However, this decline in performance was not different than most private equity programs as difficulties in the private equity marketplace dampened results across investors. AIM's returns were also impacted by the j-curve effect caused by investments made under the elevated commitment levels of 2000 and 2001.



AIM Program Performance

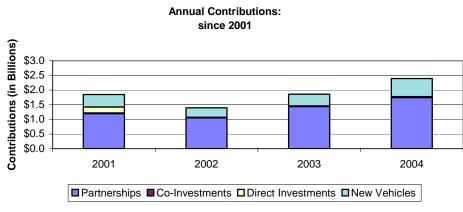
Since 2000, AIM's annual rate of return has outperformed the Wilshire Top 2500 or the *Venture Economics All Private Equity* indices in most years. This is comparable to the performance of most other private equity programs.





Source: CalPERS, Thomson Venture Economics, Investment Technologies

The increasing investment in New Vehicles¹ (i.e., California Emerging Ventures, California Initiative, and PCG Corporate Partners), the continuing reliance on limited partnerships, and the lack of co-investing, is apparent in the following charts.



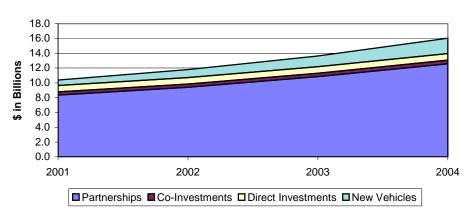
Source: CalPERS

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opportunities with a distinctive competitive advantage in an industry, geographic region, or investment style, and CalPERS contributes a significant percentage of the capital and/or obtains an equity stake in the firm



Cumulative Contributions: since 2001

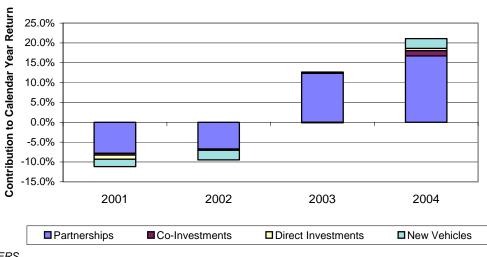


Source: CalPERS

- Since December 31, 2000, the AIM Program committed \$6.6 billion (bringing total active commitments to \$17.4 billion) and invested \$5.3 billion in private equity limited partnerships. The partnerships' annual IRRs over the four-year period ranged from (9.4)% to 21.2%. This return profile reflects the volatility in the capital markets.
- From 2001 through 2004, CalPERS committed \$1.9 billion (bringing total active commitments to \$3.8 billion) and invested \$1.8 billion in New Vehicles. The since inception IRR for New Vehicles has equaled (2.3)% and their annual IRR has ranged from a low of (22.9)% to a high of 15.2% during the four year period. New Vehicles became a sub-asset class in the late 1990s, so the j-curve should be considered when evaluating their returns through 2004.
- Since 2000, AIM has committed \$346 million and invested \$304.7 million in four strategic relationships (i.e., Carlyle, Thomas Weisel, Yucaipa, and TPG). The early returns have been mixed, but a strategic investment in a long term asset is difficult to evaluate in the earlier years.
- From 2001 through 2004, CalPERS committed \$87.6 million and invested \$106.7 million in three new co-investments. Furthermore, its IRR since inception on co-investments has been (.54)% and its annual IRRs from 2001 through 2004 have ranged from (13.4)% to 81.5%. Other institutional investors make much greater use of co-investments to enhance returns through lower management fees and carried interest. A successful co-investment program is dependent on a number of factors which staff may want to consider for development and presentation to the Investment Committee. Those factors include, among others, quality relationships with the appropriate general partners; a due diligence and decision process that meets general partner time lines; and, a process that provides AIM with the appropriate fiduciary assurance.



AIM Program Component Contribution to Performance: calendar year returns



Source: CalPERS

The most significant factors impacting AIM's performance have been:

2001 and 2002

- The overall market recession
- The j-curve on California Emerging Ventures I and II and investments related to the elevated commitments of 2000 and 2001

2003

- Overall market recovery
- Above average performance by select U.S. and European buyout funds
- Reduced net j-curve from early stage investments

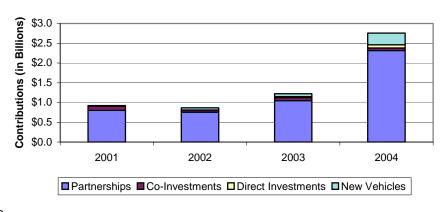
2004

- Overall good buyout fund performance
- Above average performance from funds specializing in secondaries, distressed securities and special situations
- A 4.7 multiple on one \$20 million co-investment

On an annual basis, contributions exceed distributions for the 2001-2003 time periods. In 2004, increased realizations resulted in a net inflow of cash as distributions exceeded contributions by \$365 million.



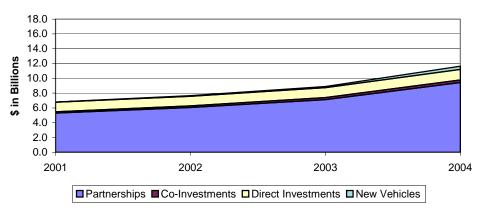
Annual Distributions: since 2001



Source: CalPERS

Since inception, the Program has generated approximately \$11.6 billion in distributions (of which \$6.4 billion have been gains and income) primarily from partnerships and to a lesser degree, earlier distributions from direct investments.

Cumulative Distributions: since 2001



Source: CalPERS



Benchmarking

There are many ways to measure the performance of a private equity program. A public market index with a premium tends to portray the opportunity cost, as if a similar amount had been invested in publicly traded securities. A *Venture Economics* type benchmark tends to measure the investment acumen of the professionals making the investment commitment. The average age of the investments also will influence the appropriateness of any particular benchmark because of the j-curve effect. Russell Investment Group has been asked to assist PCA and staff in formulating a recommended benchmark(s) for submission to the Investment Committee for its approval in the near future.



Operations

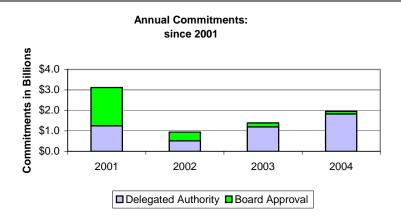
- One of PCA's principal findings from this strategic review is the need to highlight the areas where staff should focus to further AlM's continuing evolution as the Investor of Choice for the best top tier general partners. With Strategic, New Vehicle and certain buyout partners, AIM could be described as approaching the Investor of Choice. The most common underlying theme with these general partners, after expedited decision making was implemented, is the significance of the financial commitment made to each. AIM has not achieved that status with some general partners that have an overabundance of capital, nor is it realistic to think it ever will. By focusing on top tier general partners capable of satisfying the program's capital deployment requirements, AIM will become the preferred investor with those that have the best chance of contributing to AIM's programmatic goals. By taking that same approach with vehicles that will access other market segments, AIM should also become a preferred investor with them.
- PCA recommends reducing the number of relationships managed by the AIM staff to the 2000 strategic plan level. The strategic plan recommends the development of significant relationships with up to thirty general partners. Currently, approximately 135 relationships (through 450 active commitments) are managed with AIM senior staffing levels approximating those in 2000 (when there were less than 200 active commitments). As a result, staff is stretched. The recommended reduction will restore the average number of relationships per professional to the ratios maintained by other sophisticated institutional investors. This will also allow staff to concentrate on a smaller number of relationships with top-tier general partners and transition them into significant ones (i.e., increasing the size of each commitment, developing unique investment opportunities, etc.).
- Realign the AIM management (internal and external) of general partner commitments to increase the time available to cultivate high quality relationships. Competition for allocations from over-subscribed top tier general partners is escalating beyond the venture capital sector where it first appeared. A realignment should increase AIM's access to the allocations it seeks for the success of its program.
- To facilitate this realignment, AIM staff travel schedules should be adjusted so that at least one, but preferably two, more senior personnel are available in Sacramento to respond to internal and external inquiries as they arise. The complexity of realigning AIM's management of general partner commitments is a huge, but largely tactical, task. The process should include the development of detailed criteria for the realignment, a high level of communication with the parties involved, and the maintenance of a transparent environment. This should minimize the uncertainties to which those affected will be susceptible.
- AIM staff would be best managed with a more vertical organization. All AIM personnel are committed to the program, diverse and energetic. Individually and collectively, they have contributed to AIM's accomplishments. AIM's four most senior staff operate in a horizontal organization with very little, if any, hierarchy. They are supported by five less-seasoned professionals and three administrative personnel. AIM is also seeking to employ another experienced private equity professional who would augment the skill sets available internally to the Program. A more vertical organization would facilitate the correlation of responsibilities with appropriate personnel experience and enhance the training opportunities for less experienced staff. It will also allow the AIM program to elevate its



visibility and expand its dialogue with external and internal audiences. For example, this could be one facet of AIM's efforts to provide wider communication about its program, the role everyone plays, its strategy, etc., in response to a broad-based suggestion by industry respondents.

- AIM should lever its resources by increasing its use of third parties (i.e., captive fund of funds, separate accounts with an established fund of funds, etc.) to assist it in finding, committing to, investing in, and monitoring investments in the smaller to midsize end of the market. In order for AIM to fulfill its 6% asset allocation policy target with its current complement of personnel, staff should commit a significant amount of capital each time it makes a decision/recommendation. CalPERS' recent Private Equity Allocation Management "Investment Pacing" study dated August 9, 2005, projects that annual commitments of \$3 to \$3.5 billion will be necessary to consistently maintain the allocation to private equity. Smaller and mid-size fund top tier general partners are generally unwilling to accept large commitments because of investor concentration issues and an inability to invest successfully large amounts during a partnership's investment period. As part of this leverage enhancement, AIM should consider the trade-offs involved in vehicle/structure selection compared to the expected cost levels/net returns. When deciding the amounts to be committed to any one vehicle/structure, AIM should consider market size, manager concentration, staff coordinator/facilitator, etc. It should be understood that the implementation of this leverage enhancement will be complex and time consuming.
- In order for the AIM Program to expedite decision making and become more competitive for attractive investment opportunities, delegated authority was approved and implemented under the 2000 strategic plan. Under delegated authority, staff was authorized to make commitments up to specified limits and under defined circumstances. Staff has effectively utilized its delegated authority, as 90% of the commitments made over the past two years occurred under delegated authority.





Source: CalPERS

- AIM staff should be given the discretion to decide if a new situation, not contemplated in the original Delegation Resolution, meets the intent of the Resolution. Expedited decision making was further expanded in 2005 to accommodate the growth of the private equity markets. PCA understands that each application of delegated authority includes approval by the Legal Office. The definitions included in the Delegation Resolution could not reasonably have contemplated the many variables encountered in day-to-day investing. As new situations are encountered, the Legal Office has adhered to the form of the Delegation while AIM staff has wanted to be more flexible. New situations that meet the intent of the Delegation Resolution should be left to AIM staff's discretion.
- The Investment Committee should consider delegating the authorization of New Vehicle commitments under a specified amount to staff. Top tier general partners seek expedited decision making and alignment of interests in their best limited partners. Delegated authority has expedited AIM's decision making on renewals and more traditional partnership investments. However, the continuing requirement that New Vehicles need Investment Committee approval complicates decision making that might be required for AIM to see such opportunities when top tier general partners are contemplating a unique vehicle and are seeking investors. By adopting the recommendation, the New Vehicle approval process will parallel that for other forms of investments.
- The two prior recommendations should be included in an amendment to the Delegation Resolution. As staff becomes increasingly hierarchical, further revisions to delegated authority may become obvious to them and the Investment Committee. Staff and the Investment Committee should remain vigilant about the competitiveness of the timing of AIM's decision making.
- When a general partner relationship has been assigned to staff, consultant, and attorney, those same individuals should be responsible for renewals, etc. This continuity will enhance the relationship and minimize the start up activity involved if a new team were assigned. Of course, if there is a need to validate prior efforts, different personnel should be used.



External Resources

- AIM currently has the following Pool of Advisors under contract for the services described:
 - Blomquist & Company focuses on complex transactions, e.g., JEDI II workout
 - Hamilton Lane due diligence, investment analysis and strategic advice
 - KPMG LLP portfolio monitoring assistance and other special projects
 - LP Capital Advisors portfolio monitoring and due diligence
 - Pacific Corporate Group due diligence and strategic advice
 - Probitas Partners analysis of market trends and strategic private equity roundtables
 - Sextant Search Partners due diligence support in manager evaluation process
 - PrivateEdge Group portfolio monitoring and analysis, due diligence, and benchmarking
 - Thomas Weisel manage stock distributions from partnerships
- Three of AIM's nine external resources have other roles in the private equity program:
 - Pacific Corporate Group general partner for PCG Corporate Partners LLC
 - Probitas Partners placement agent for funds to which AIM commits
 - Thomas Weisel strategic partner and general partner for six different funds

In June 2005, CalPERS adopted a Consultant Conflict of Interest Protocol which requires periodic disclosure of conflicts of interest, as defined. This Protocol should provide the AIM Program with the necessary disclosures to make the appropriate decisions in retention and utilization of external resources.

- Staff should monitor personnel availability when assigning resources.
- Staff should design a process that seeks strategic input from its advisors periodically and systematically which can be shared with the Investment Committee as part of AIM's annual plan.
- The consultant's role in the commitment process should be well defined and publicized.
- Due diligence should be customized if at all possible to facilitate renewals and to allow early and significant commitments to top tier general partners.
- CalPERS is well served by the professionalism manifested by its external resources. PCA's interviews corroborated this.
- Certain consultants possessing selected expertise and knowledge have been unwilling
 to accept fiduciary responsibility contractually. The absence of a fiduciary relationship
 should be acceptable in limited cases where the consultant's duties are appropriate to
 the circumstances.

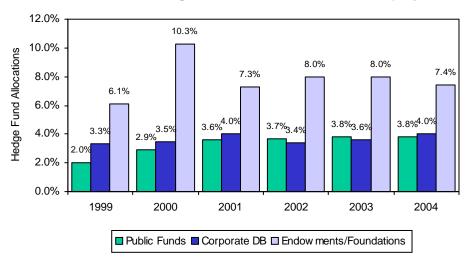


Asset Allocation Trends

Although fund raising by general partners and commitments by CalPERS are expected to rise in 2005, there is little, if any, evidence that CalPERS should consider revising its Policy Target or Ranges for Alternative Investments at this time.

According to a recent survey conducted by Greenwich Associates, allocations to private equity have remained relatively stable for public funds, corporate plans, and endowments/foundations. Endowments/foundations have maintained the highest allocation to private equity reaching a high of 8.0% in 2002 and 2003 while declining to 7.4% in 2004. Allocations to private equity for corporations remained within a band ranging from 3.4% to 4.0% over the latest four-year period. Public pension plans exhibited a slight increase in allocations to private equity increasing from 3.6% in 2001 to 3.8% in 2004.

Dollar-Weighted Allocations to Private Equity

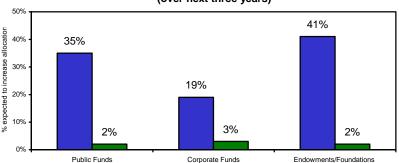


Source: Greenwich Associates, 2005 [2004 responses: public (304), corporate (1,008), endowments./foundations (364)]

A significant portion of these institutional investors are expecting to increase their allocations to private equity over the next three years. Endowments/foundations exhibited the largest proportion with 41% of respondents expecting to increase allocations to private equity. Public funds were not far behind with 35% expecting increases. In each category, only 2% to 3% of respondents actually expected a decrease in their allocation to private equity.



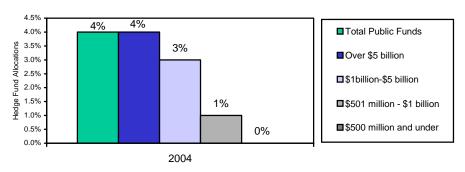
Future Private Equity Allocation Expectations (over next three years)



Source: Greenwich Associates, 2005 [responses: public (43), corporate (112), endowments./foundations (172)]

Private equity allocations of the public pensions have primarily been driven by the large plans (over \$5 billion in assets). Average allocations of the smaller plans scale down as the plan asset size decreases.

Dollar-Weighted Allocations to Private Equity:
Public Funds

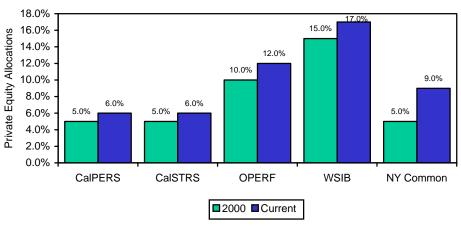


Source: Greenwich Associates, 2005 [2004 responses: public (304), corporate (1,008), endowments./foundations (364)]

PCA gathered private equity target allocation information for several large public pension plans to compare current targets with those in place in 2000. Across all plans examined, the target allocation has increased over the past five years.

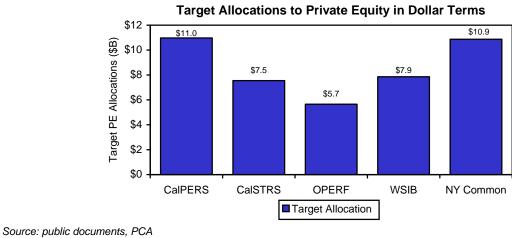






Source: public documents, PCA

In dollar terms, these target allocations result in significantly different goals in terms of capital invested in private equity. CalPERS, with a 6.0% allocation, has the largest targeted program at approximately \$11.0 billion as of year-end 2004.



Other large state pension plans have also recently worked towards removing restrictions on investing in alternative investments. The New Jersey State Investment Council (\$70 billion in total assets) has begun investing in private equity with a target allocation range of 5%-7%.



Other

- The Investor of Choice to top tier general partners is typically a laissez-faire limited partner. Freedom of Information Act (FOIA) disclosure and "outsourcing" of U.S. public sector employment have been topics of interest to the Investment Committee and the private equity industry. Staff has developed side letter agreements with many general partners receiving current commitments that have addressed these issues to the satisfaction of the general partner, staff, and legal counsel. AIM (through Grove Street Advisors) did not receive an allocation from fifteen general partners that cited FOIA requirements as the impediment. On September 22, 2005, Governor Schwarzenegger signed SB 439 redefining the disclosure requirements for alternative investments, as defined, thereby diminishing FOIA as an obstacle to future potential allocations. When the topics were raised during PCA's interviews with market representatives, responses varied. They ranged from "no problem" to claims that the issues dilute CalPERS' image as an investor seeking maximum risk adjusted returns. Laissez-faire deviations are least appreciated by venture capital general partners.
- The whole approach to strategic relationships should be reviewed by the Investment Committee.
- The cross section of the private equity markets that PCA interviewed feels that private equity returns will be compressed over the next five years and the difference between top and lowest deciles will increase. This will heighten the importance of selecting top tier partners.
- PCA and those we interviewed believe that there is a possibility that some sectors of the hedge fund and private equity markets will converge. We recommend that you consider merging the management of these two programs if the evidence of their convergence becomes more compelling.

Additional Comments

The following comments were made during the interviews we conducted which we would encourage staff to consider going forward:

- Staff should consider outsourcing the oversight of troubled partnerships. Currently, they
 consume time which could be more productively devoted to furthering the goals of the
 program.
- Balancing the interests of limited and general partners is necessary in order to further AIM's position with top tier general partners. Staff should be aware that its image may be defined, in part, by participation in Institutional Limited Partners Association, and that not all general partners/other institutional investors will appraise that effort positively.
- Grove Street Advisors (GSA) manages three separate exclusive partnerships for AIM
 with a primary focus of venture capital. GSA has committed to over 140 partnerships
 managed by more than 90 private equity teams. The more successful teams will need
 and warrant follow on funding. AIM should develop a vehicle with GSA for that to occur.